



# MISSOURI CONSERVATIONIST

VOLUME 82, ISSUE 3, MARCH 2021  
SERVING NATURE & YOU



# 3 Things YOU Can Do to Help Pollinators

1

## Plant Natives

Native plants are a food source for bees, butterflies, and other pollinators. Add the plants shown below to your landscape.

2

## Keep it Blooming

Keep something in bloom each season. Some species bloom all year, others only in April and May, still others in July and August. Learn more at [mdc.mo.gov/monarch](http://mdc.mo.gov/monarch).

3

## Get Involved

Protect native grasslands, provide nesting places, and become a wildlife gardener. To learn how, visit [GrowNative.org](http://GrowNative.org).



Common milkweed



New England aster



Showy goldenrod



Prairie blazing star



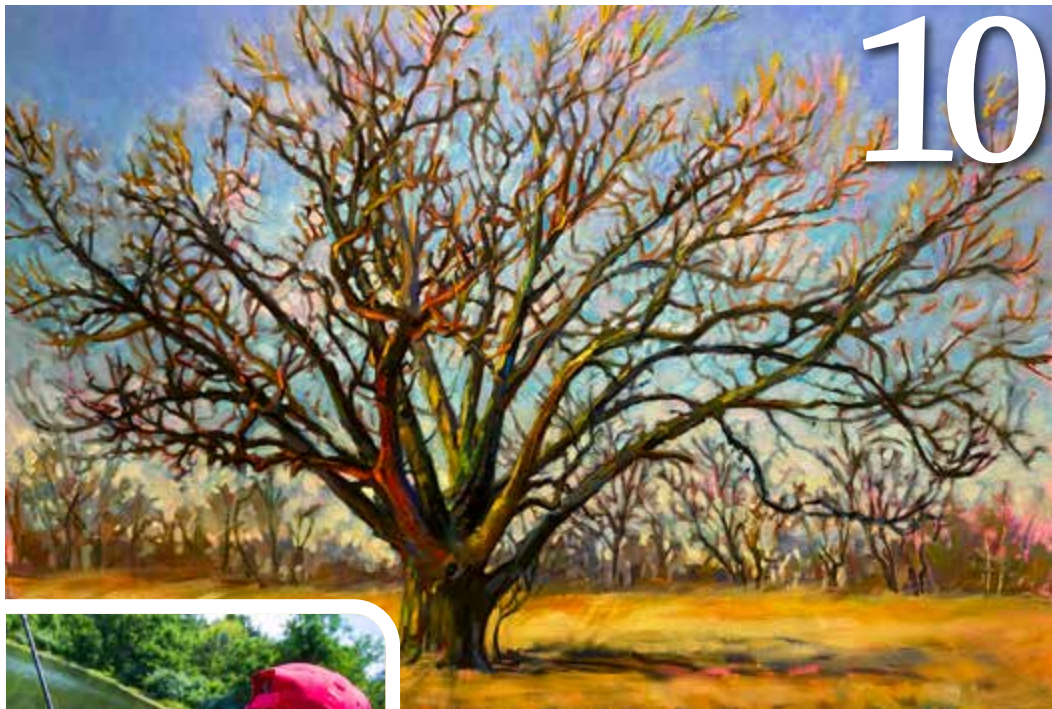
Wild bergamot





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MARCH 2021  
VOLUME 82, ISSUE 3



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## MISSOURI CONSERVATIONIST



### ON THE COVER

State champion  
bald cypress in New  
Madrid County

PAINTING BY JANE MUDD

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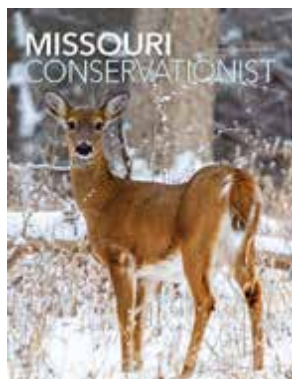
# Inbox



## Letters to the Editor

Submissions reflect readers' opinions and may be edited for length and clarity. Email [Magazine@mdc.mo.gov](mailto:Magazine@mdc.mo.gov) or write to us:

MISSOURI  
CONSERVATIONIST  
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**BEAUTIFUL DOE**  
I have to comment on January's cover photo by Noppadol Paothong. This beautiful mature doe is about as good as it gets. Thanks for highlighting the best of Missouri's outdoor heritage.

Robert Gober  
Webb City

## WINTER TROUT

I am following up on a letter sent to you in November 2007 that was published in the *Missouri Conservationist* in March 2008. At the time, I was thanking MDC for winter stocking rainbow trout at Everyday Pond at Missouri Western State University (MWSU).

After reading the January 2021 issue, I noticed a couple of articles about urban trout fishing. I would like to thank MDC for now stocking in Krug Park in North St. Joseph. I am an avid fly fisherman and enjoy the opportunity to catch rainbows in the winter.

I caught a 9-pound, 1-ounce rainbow at Everyday Pond. She was released quickly to be caught again.

Thanks again, MDC, for partnering with MWSU and the City of St Joseph.

Mike Buckler St. Joseph

## FOR THE BIRDS

We loved *Bird's-Eye View* (Page 10) and the cut-out bird guide in the December *Conservationist*.

Suggest to deer hunters that they save the fat from their harvested deer to make suet cakes. We save the fat in the freezer until we are finished with hunting, then render it in an outdoor kettle. After it cools slightly, we pour it into styrofoam picnic bowls that already contain a large spoonful of mixed birdseed. After stirring thoroughly, we let the bowls cool and harden so they are easy to store even through the summer. Once cooled, the suet cakes pop easily out of the bowls, and fit perfectly into the little square wire-box suet holders. All birds love them, all year around. Only bluebirds do not seem interested.

Sue Allmart and Sammy Williams Mexico

## FROM GEORGIA TO MISSOURI

I wanted to take a moment to tell you how much I appreciate what you do for Missouri conservation.



Trout stocking

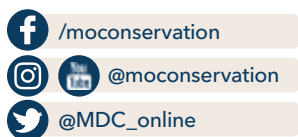
As a transplanted southerner from Georgia, I've now lived in Missouri for 16 years. And while you can never really take Georgia out of the boy, I've grown to love this state and appreciate its beauty. I look forward to receiving my issue of the *Missouri Conservationist* each month, and the beautiful photos and articles that are found in it.

But what I love is to read the *Up Front* editorial (Page 3). Director Pauley, you are a gifted writer, and I enjoy how your thoughts set up the rest of the magazine so nicely. Continued success, and thanks for your leadership. You've helped make this Georgia boy feel right at home!

David Cade Manchester

TROUT STOCKING: DAVID STONNER

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## Have a Question for a Commissioner?

Send a note using our online contact form at [mdc.mo.gov/commissioners](http://mdc.mo.gov/commissioners).





### Want to see your photos in the Missouri Conservationist?

Share your photos on Flickr at  
flickr.com/groups/mdcreaderphotos-2021,  
email Readerphoto@mdc.mo.gov,  
or include the hashtag #mdcdiscovernature  
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1 | Jacks Fork  
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2 | Fishing  
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# Up Front

with Sara Parker Pauley

✳ My love of poetry came from my grandfather, who would read aloud the masterpieces of Whitman, Kipling, and Frost. The very first poem I committed to heart as a child was *Trees* by Joyce Kilmer. I loved the simplicity of the rhymed verses, the purity of the crafted images.

Writer William Blake wrote, "The tree which moves some to tears of joy is in the eyes of others only a green thing which stands in the way." I surmise that regular readers of the *Missouri Conservationist* are in the former group — in that they find a tree a thing of awe, beauty, and mystery.

I am especially drawn to those branched wonders that loom large on the landscape. Living close to the Missouri River, I marvel at the towering cottonwoods, bur oaks, and my favorite, sycamores, with their white trunks illuminating the world around them.

Artists, poets, photographers, and writers alike have made gallant efforts to interpret the mystery of trees. You will be inspired in this issue by Missouri artist Jane Bick Mudd's beautiful renditions of Missouri's champion trees on Page 10.

Just as intriguing is how science continues to reveal the mystery of trees — including how they heal and support humankind — even how they communicate, as beautifully told by German Forester Peter Wohlleben in his best seller, *The Hidden Life of Trees*.

"Trees are sanctuaries," said Swiss poet Herman Hesse. "Whoever knows how to speak to them, whoever knows how to listen to them, can learn the truth."

*Sara Parker Pauley*

**SARA PARKER PAULEY**, DIRECTOR  
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[mdc.mo.gov](http://mdc.mo.gov) 3

# Nature LAB

by Bonnie Chasteen

Each month, we highlight research MDC uses to improve fish, forest, and wildlife management.

## COTTONTAIL MANAGEMENT

### Grasslands and Eastern Cottontails

✳ **Can restoring native grasslands help eastern cottontails?** Researchers from MDC and the University of Central Missouri (UCM) have been exploring that question on Schell-Osage and Linscomb conservation areas in southwest Missouri.

“We know restoring native grassland habitat benefits many wildlife species, improves soil health, and provides excellent forage for livestock,” said MDC Small Game Coordinator David Hoover.

“We assume it benefits cottontail rabbits, but this study will provide hard data,” he said.

UCM Assistant Professor Daniel Wolcott added that the study is about “determining those elements of native grassland habitat that rabbit populations respond most positively to.”

The mark-recapture study started in 2016, and the research team used baited live traps during 14-day trapping periods each spring and fall. The team collected demographic data (age, sex, etc.) on all captured rabbits and gave each one a uniquely numbered ear tag. “This



University of Central Missouri graduate research assistant Dottie Stimac releases a cottontail rabbit after tagging it and collecting data.

Study indicates cottontails respond well to diverse native grassland habitat

helped us assess rabbits’ movements after recapture,” said UCM graduate research assistant Dottie Stimac.

Stimac and her team began the study’s vegetation data collection in 2019. “By monitoring the vegetation at each trap site, we quantified the habitat characteristics most favorable to rabbits,” she said. Stimac said that although the results are preliminary, there was a positive relationship between wildflower cover and rabbit occurrence.

“The preliminary results of this study mirror similar studies of bobwhite quail, grassland songbirds, and native insects,” Hoover said. “These showed that providing diverse native grassland habitat, both from a structural and number of species standpoint, is critically important.”

“Being able to quantify wildlife responses to specific management activities and landscape features will allow managers to better plan and evaluate their management actions,” Stimac added.

## Southwest Cottontail Study at a Glance



### Research Partner

University of Central Missouri

### Purpose

Determine the native grassland elements that cottontail rabbits favor

### Methods

- Mark-recapture from 2016–2019
- Vegetation data collection during 2019 trapping season

### 296 Captures of 229 Rabbits

- 2016: 76 captures of 59 individuals
- 2017: 68 captures of 48 individuals
- 2018: 75 captures of 62 individuals
- 2019: 77 captures of 60 individuals

### Preliminary Results

- More rabbits were captured in areas with wildflowers
- Fewer rabbits were captured in areas with increasing grass cover

### Management Indication

Cottontails favor diverse grassland habitat



# In Brief

News and updates from MDC

## GET HOOKED ON MISSOURI TROUT FISHING

MARCH 1 MARKS THE OPENING OF CATCH-AND-KEEP FISHING AT MISSOURI'S FOUR TROUT PARKS

➔ Bennett Spring State Park near Lebanon, Montauk State Park near Licking, Roaring River State Park near Cassville, and Maramec Spring Park near St. James usher in the opening of catch-and-keep trout season on March 1, which runs through Oct. 31.

MDC operates trout hatcheries at all four parks and stocks rainbow trout daily throughout the season.

Hatchery staff will again use data on trout tags sold in past years to anticipate the number of anglers expected on opening day. Staff will then stock about 20,000 trout across the four trout parks for anglers on opening day.

Trout anglers need a fishing permit and a daily trout tag to fish in Missouri's trout parks. Learn more at [short.mdc.mo.gov/ZaD](https://short.mdc.mo.gov/ZaD).

MDC encourages trout anglers to buy their fishing permits ahead of time from numerous vendors around the state, online at [mdc.mo.gov/buypermits](https://mdc.mo.gov/buypermits), or through the MDC free mobile app — MO Fishing — available for download through Google Play for Android devices or the App Store for Apple devices.

Daily trout tags can only be purchased at each of the four trout parks. MDC encourages trout anglers to have the correct amount of cash for daily tags, if possible.

The cost of a daily trout tag to fish at three of Missouri's four trout parks — Bennett Spring State Park, Montauk State Park, and Roaring



Brown trout

River State Park — is \$4 for adults and \$3 for those 15 years of age and younger. The daily limit is four trout.

MDC is continuing a pilot program at Maramec Spring Park where the daily limit has been raised from four to five trout and the cost of a daily trout tag for adults is \$5 and \$3 for anglers 15 years of age and younger.

Montauk State Park store hours for daily tags will be Feb. 27 from 8 a.m. to 8 p.m. and Feb. 28 from 8 a.m. to 9 p.m. The store will open at 4:30 a.m. on March 1.

Bennett Spring State Park and Roaring River State Park store hours for daily tags will be Feb. 27 from 1 to 9 p.m. and Feb. 28 starting at 9 a.m. through March 1.

Maramec Spring Park store hours for daily tags will be 7 a.m. to 3 p.m. beginning Feb. 19 to Feb. 26. Normal hours of 5:30 a.m. to 9:30 p.m. will begin on Feb. 27.

MDC reminds anglers and others visiting the trout parks to abide by all posted signs regarding wearing masks and social distancing requirements.

MDC notes that extensive hatchery renovations at Roaring River have recently been completed. The modernization of the facility will provide increased trout production, healthier fish, and the reopening of the raceways where trout are raised before release. Due to Roaring River Hatchery being out of production, current trout inventory levels will require adjustments to normal stocking rates, but there will be plenty of fish for anglers to have another great season in 2021. Learn more at [short.mdc.mo.gov/ZaD](https://short.mdc.mo.gov/ZaD).

MDC also notes that Roaring River has changed some fishing zones and advises trout anglers to check at the park for new information. Changes include changing the lower end of Zone 3 and moving Zone 3 about 545 feet up into Zone Two.

### PADDLEFISH SEASON BEGINS MARCH 15

Imagine catching a giant, prehistoric fish whose ancestors swam during the time of dinosaurs. That is a reality for thousands of paddlefish snaggers during Missouri's annual spring paddlefish snagging season. Paddlefish, named for their large, paddle-shaped snouts, are an ancient species that can grow to 7 feet and weigh more than 100 pounds.

According to MDC, the state's major paddlefish snagging waters include Lake of the Ozarks, Truman Lake, and Table Rock Lake. The paddlefish snagging season for these and most other waters in the state runs March 15 through April 30. The season for the Mississippi River is March 15 through May 15 with a fall season of Sept. 15 through Dec. 15.

MDC reminds snaggers to immediately release sublegal fish for future harvests and offers these tips:

- Use landing nets, not gaffs, which can kill young fish.
- Wet hands before handling fish and avoid excessive handling.
- Never put fingers in the gills or eyes.
- Remove hooks carefully and get undersized fish back into the water as quickly as possible.

Learn more about paddlefish snagging regulations, snagging reports, and more at [short.mdc.mo.gov/ZTC](https://short.mdc.mo.gov/ZTC).

### MDC REPORTS FINAL DEER HARVEST NUMBERS

Missouri's 2020–2021 deer-hunting season ended Jan. 15 with MDC reporting a preliminary total harvest of 296,516. Of the deer harvested, 140,468 were antlered bucks, 28,587 were button bucks, and 127,461 were does.

Top harvest counties were Franklin with 5,786 deer harvested, Howell with 5,367, and Callaway with 4,989.

Hunters harvested 285,873 deer during the 2019–2020 deer hunting season, with 134,092 being antlered bucks, 27,970 being button bucks, and 123,811 being does.

Deer hunting ended with the close of the archery season. Preliminary data from MDC showed that hunters checked 67,180 deer during the 2020–2021 archery deer season. Top counties for the archery deer season were Jefferson with 1,630, Saint Louis with 1,384, and Franklin with 1,315. Hunters checked 61,407 deer during the 2019–2020 archery deer season.

Fall archery turkey hunting also ended Jan. 15. Preliminary data from MDC showed 2,905 turkeys harvested. Top counties for the fall archery turkey season were Greene with 84, Franklin with 78, and Texas with 61. Hunters harvested 2,406 turkeys during the 2019–2020 fall archery turkey season.

MDC reported four firearms-related hunting incidents during the 2020–2021 fall deer and turkey hunting seasons. The incidents were all self-inflicted and non-fatal.

## Ask MDC

### Got a Question for Ask MDC?

Send it to [AskMDC@mdc.mo.gov](mailto:AskMDC@mdc.mo.gov)  
or call 573-522-4115, ext. 3848.

#### Q: I noticed this black-necked stilt at Otter Slough Conservation Area last March. Are they common?

➔ As transient migrants in spring or fall, black-necked stilts are considered rare or casual visitors statewide. In summer they do breed occasionally in southeast Missouri. Most observers see them during migration as they forage on mudflats, shorelines, and shallow wastewater lagoons. In summer, these stilts may be seen in the rice fields in the Bootheel's lowlands.

Like most other shorebirds, black-necked stilts are ground nesters. Both parents participate in nest construction, egg incubation, and rearing the chicks. Choosing an area raised higher than the water level, they scrape a ground depression and line it with grass, rocks, and other objects. A clutch comprises two to five eggs, which hatch in 24–29 days. As with most other ground-nesting birds, the young are precocial — relatively well developed, covered in down, and able to walk.

Black-necked stilts usually nest in colonies, and their numbers permit them to defend their nests as a group. When an intruder appears, numbers of adults fly into the air, circling and calling. They



Black-necked stilt

also may mislead or distract intruders, similar to killdeer, by feigning sick or injured behavior or by plopping on the ground as if sitting on a pretend nest.

#### Q: A duck laid and buried six eggs in a planter on my deck and now a goose laid more and is sitting on the eggs. What will happen now?

➔ Most ducks lay approximately an egg a day and don't start sitting on the nest to incubate until after the entire clutch — around eight to 12 eggs — has been laid. Geese, too, lay approximately an egg daily, making it unlikely the duck eggs will be incubated properly. Geese also are known for removing foreign objects from their nests, which also raises uncertainty. But if the eggs are viable, the



ducklings will likely hatch before the goslings do. MDC's waterfowl scientists are not sure how the mother goose might respond. If she adopts them, it could still be tough for the ducklings to thrive. She'll likely lead the brood to grassy areas, which will be less-than-ideal for the ducklings. Unfortunately, we must rate the likelihood of the ducks' survival as low. But a small possibility of a mixed brood does exist. It could get interesting!

**Q: We found this on a tree. What is it?**

➔ This is an ootheca — the egg case of a Chinese mantis. Female mantids lay these foamy egg cases on vegetation in the fall, where they harden and remain until spring. The cases hatch in late spring after several weeks of warm weather. Each ootheca can contain hundreds of eggs and typically hatch 50 to 200 tiny mantids simultaneously.

Chinese mantids are widespread throughout much of the United States but are not originally



Chinese mantis egg case

native to North America. These insects are quite large — around 4 inches in length as adults. They eat other insects, both pest and beneficial species, as well as larger prey. It has been noted they occasionally take small frogs, lizards, and even hummingbirds.



**Sam Whisler**

JOHNSON COUNTY  
CONSERVATION AGENT

*offers this month's*

**AGENT  
ADVICE**

Paddlefish season opens March 15 and runs through April 30 statewide, May 15 on the Mississippi River. Anglers must be properly licensed and know the regulations governing the waters they are visiting. Once the daily limit of two paddlefish is reached on Lake of the Ozarks and Truman Lake (including their tributaries) and the Osage River below U.S. Highway 54, anglers must stop for the day. Be mindful of size restrictions where you are fishing. Finally, paddlefish eggs cannot be possessed while on the water or adjacent banks or transported outside the body of the fish.

FOR MORE INFORMATION, INCLUDING METHODS, LIMITS, PERMITS, REGULATIONS, TIPS, AND WHERE TO FISH, VISIT **SHORT.MDC.MO.GOV/ZTC**.

**What  
IS it?**

Can you guess this month's natural wonder?

*The answer is on  
Page 9.*





# WE ARE CONSERVATION

Spotlight on  
people and partners

by Angie Daly Morfeld

## James Karlsruhe

➔ Earning the Boy Scouts of America's William T. Hornaday Award is no small feat. For Eagle Scout James Karlsruhe, 14, the journey took him through four projects and two-and-a-half years. Karlsruhe, a member of Boy Scout Troop 344, Ladue, worked with Powder Valley Conservation Nature Center, Kirkwood, to remove invasive honeysuckle and replace it with native plants. Karlsruhe also established bat boxes at Beaumont Scout Reservation, High Ridge, to help a large bat colony displaced by renovations at a local church. He planted willow tree stakes and native bushes along Deer Creek to prevent erosion, and planted natives and set up bee boxes in Southwest Park, Webster Groves.

### Award-worthy work

The William T. Hornaday Award is bestowed on scouts for distinguished service in natural resource conservation.

### In his own words

"I enjoy the outdoors and hope to do more projects in the future."

by Cliff White

James Karlsruhe planted these trees and shrubs in a riparian corridor at a local park as part of his Eagle Scout project.

What's **your** conservation superpower?



## MDC ADVISES TREATING ASH TREES TO COMBAT EAB

The emerald ash borer (EAB) is an exotic Asian beetle that was introduced into North America before 2002 and is now found throughout much of Missouri. EAB larvae feed on and kill ash trees. Ash trees can be protected from EAB by using specific insecticides.

MDC recommends that property owners and communities begin insecticide treatment for their healthy ash trees this spring if they want to resist EAB attack.

MDC Forest Entomologist Robbie Doerhoff said that smaller trees (20 inches or less in diameter) can be treated by the homeowner using a soil-drench insecticide. Trees larger than 20 inches in diameter should be injected with insecticide by a professional.

"It's best to call an arborist certified by the International Society of Arboriculture to do this job," Doerhoff said. She recommends starting with [TreesAreGood.org](http://TreesAreGood.org), which lists several ISA-certified arborists in Missouri.

Learn more about EAB from MDC online at [short.mdc.mo.gov/Z4C](http://short.mdc.mo.gov/Z4C).



Clockwise from top: Signs of an emerald ash borer infestation under the bark of an ash tree. An adult EAB beetle emerges from an infested tree, leaving a D-shaped exit hole that is 1/8 inch in diameter. Adult EABs are less than an inch long.

## GET NEW MDC HUNTING AND FISHING BOOKLETS

Missouri hunters, trappers, anglers, and others can get free copies of updated booklets on spring turkey hunting, trapping and hunting seasons, fishing, and the *Wildlife Code of Missouri* starting in early March. The handy booklets have information on related permits, seasons, species, regulations, limits, conservation areas, sunrise and sunset tables, and more.

The booklets — *2021 Spring Turkey Hunting Regulations and Information*, *Summary of Missouri Hunting and Trapping Regulations*, *Summary of Missouri Fishing Regulations*, and the *Wildlife Code of Missouri* — are available at MDC regional offices, MDC nature centers, and where permits are sold. Each booklet also is available online at [mdc.mo.gov](http://mdc.mo.gov) using the search tool at the top of the homepage.



## WHAT IS IT? SPRING BEAUTY

Spring beauties, Missouri's most widely distributed early spring flower, are found in abundance in open woods, fields, valleys, suburban lawns, and sometimes rocky ledges. Their five-petal white flowers bloom from February through May. Picking up on the scientific name, *Claytonia virginica*, they also are known as Virginia spring beauty. They are also referred to as fairy spud for the edible corms, which resemble tiny potatoes.







The *Missouri Conservationist's* first celebration of Missouri's champion trees featuring paintings by Jane Bick Mudd appeared in the March 2016 issue. Reconnect with it at [short.mdc.mo.gov/Znc](http://short.mdc.mo.gov/Znc).

# The Mighty Ones II

A SECOND CELEBRATION  
OF MISSOURI'S CHAMPION TREES

by Bonnie Chasteen | paintings and field notes by Jane Bick Mudd





**Pecan**  
*Carya illinoensis*  
Height: 86 feet  
Spread: 114 feet  
Circumference: 236 inches  
Points: 351

**O**n a bright, windy afternoon last March, Jane Mudd set out to paint Fred and Mary Jo Wilson's champion pecan tree. This battered old survivor stands alone in a river bottom crop field in Cooper County. In 2019, floodwaters kept Mudd from setting up her easel to paint the tree, but this day, she hiked 300 yards across the now-solid bottom carrying canvas, easel, and pack.

Mudd taught painting at Williams Woods University in Fulton for 23 years. When she retired in 2019, she set out to paint a second selection of Missouri's champion trees for the *Conservationist*. Her project took her to six locations around the state. To paint a tree as Mudd does, on location and often in challenging conditions, she gets to know a tree and its place in ways few others do. "For me, it is important to get the feel of the tree, and that requires spending time with it," she said. She also enjoys getting to know the owners and caretakers of these ancient champions when she can.

The Wilsons' pecan tree became a state champion in 2012, and they proudly display a framed MDC state champion tree certificate in the entryway of their farmhouse. For most of their lives, the couple farmed the bottom and raised 10 to 12 acres of vegetables to sell on Main Street in Boonville. Now in their 70s, they have retired from farming.

Fred Wilson's parents moved to the farm in the spring of 1956. "The pecan had a big crop on it that year, and we picked up 470-some pounds," he recalled. "But it had no more until '63. It's had two little crops since then, and that's it."

Wilson said he thinks the tree is about 200 years old, and he noted that it has changed a lot since he was a boy.

"The tree is all top, no trunk," he said. "But when we first moved here, you couldn't reach up and touch the limbs. When I farmed, I'd pull up under it with the tractor and sit in the shade and rest."

Wilson said the pecan tree still puts out leaves, "but some of the limbs are dying. The river has put so much fill dirt around it — it's suffocating it."

"I don't like to see it die," he said. "If that thing could talk, it could tell you what all it's seen."

### Jane's Note

*Isolated in the middle of the bottom with only a levee between it and the river, the lone pecan endured many floods, witnessed hundreds of plantings and harvests as well as continued efforts to control the river. It is humble, stoic, worldly, trying to tell us something. I'm not sure this tree had many admirers or praise, but owners Fred and Mary Jo Wilson appreciated that tree from the beginning of their farming days. And I think they, too, fit the selfless, stoic, and resilient nature of that tree.*

### Mary Jo Wilson 1947–2020

We're sad to note that Mary Jo Wilson died Nov. 16, 2020. The Boonville community will remember her for her vegetable truck "with the rainbow umbrellas." Fred still lives at the farmhouse, where he plans to plant a little patch of vegetables this spring.



## A Playground Sentinel

The Show-Me State's champion blue ash stands near the playground in Sturgeon's City Park in northern Boone County.

Sturgeon Mayor Steve Crosswhite said the tree was probably on-site when the Sturgeon Board was established in 1955. "I believe this tree is easily over 60 years old," he said.

Angela George, the last MDC forester to measure the tree (July 2016), noted that it's rare to see a blue ash in a city location. "Ash are fairly tolerant of soil compaction, so this trait may have helped this tree to withstand being in the middle of a high-use area," she added.

She also noted that this blue ash, like all ashes in Missouri, is in danger of emerald ash borer (EAB) attack. "EAB is an exotic, invasive, wood-boring insect that infests and kills native North American ash trees," she said.

Mayor Crosswhite is consulting with an MDC community forester about protecting the city's ash trees. Despite its vulnerability to the EAB, Sturgeon's towering champion blue ash stands at the edge of City Park, ready to welcome families and shade children at play.

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More information on the emerald ash borer is available at [short.mdc.mo.gov/ZE7](http://short.mdc.mo.gov/ZE7).

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## Jane's Note

*This tall, stand-alone, and I thought somewhat unassuming blue ash is still alive after so many have disappeared recently in this state. Maybe it is the joyful shouts from the swings and slides that have kept it healthy for so long — or its nature of providing a welcoming shade. I had to use a tall canvas and focus on proportion with every paint stroke. This was painted late summer in 2019.*

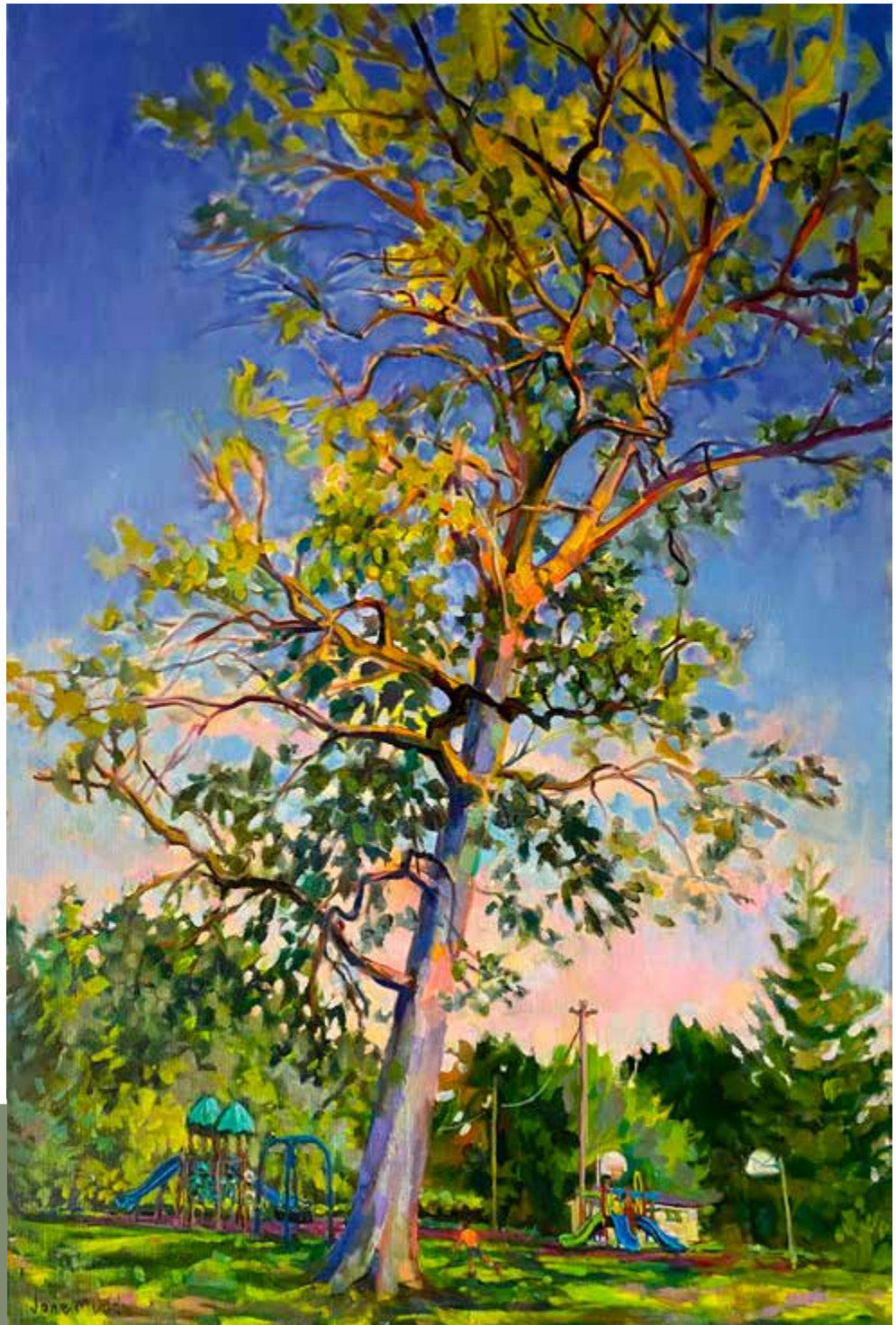
**Sturgeon City  
Park's Blue Ash**  
*Fraxinus quadrangulata*  
Height: 89 feet  
Spread: 55 feet  
Circumference: 101 inches  
**Points: 204**

Conservation nonprofit American Forests and MDC use the following formula to assess a point value for big trees:

**Height** in feet

+  $\frac{1}{4}$  average crown spread in feet

+ trunk circumference in inches, measured at 4.5 feet above the ground





## A Shady Gathering Place

With its joined trunks, it's easy to see why couples want to get married under Blue Bell Farm's champion Osage orange tree near Fayette in Howard County. The Bryant family has owned the farm for seven generations, and it is currently a wedding venue.

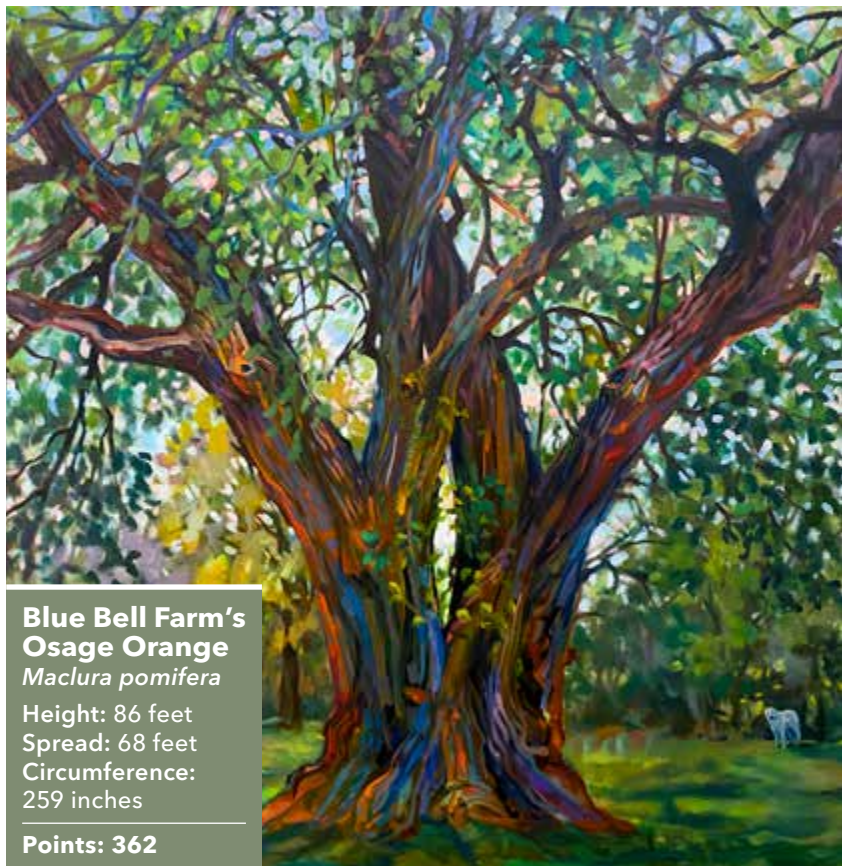
Jamie Bryant co-owns the business with her husband, Derek. "We love the tree," she said. "We've taken tons of photos with our daughter when she was growing up. She loved climbing on this fixture in our family life."

When a Los Angeles woman with Missouri family saw a Blue Bell wedding photo featuring the Osage orange on Instagram, she wanted to have her wedding underneath it, Bryant said.

"They had a small wedding under the tree in October 2020," she said.

## Jane's Note

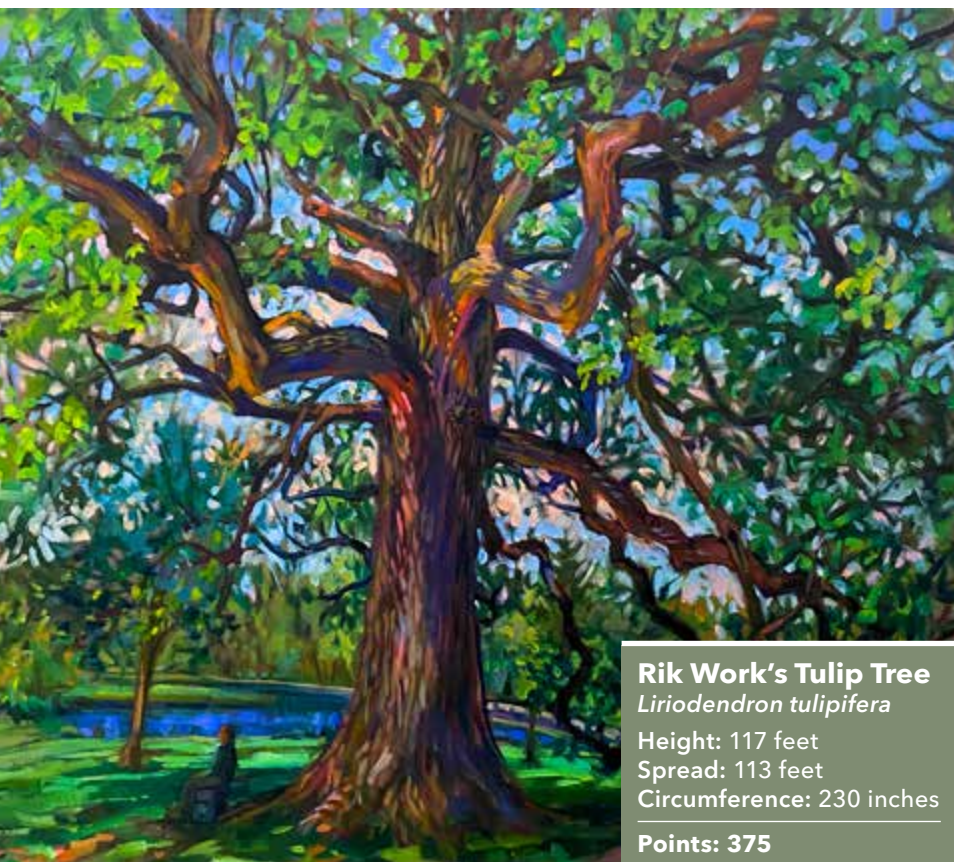
*The Osage orange located at the entrance to Blue Bell Farm in Fayette is quite imposing with its double trunks, wide base, and gnarly bark. I typically stand when painting outside, but I decided to sit to be low and close to the base. This was painted in October 2019. The light moving across the trunk revealed not only the contrasting shadows but the warm/cool contrasts as well. I really don't see such intense color in the beginning. It is only after time spent looking and waiting that things start to happen.*



**Blue Bell Farm's  
Osage Orange**  
*Maclura pomifera*

Height: 86 feet  
Spread: 68 feet  
Circumference:  
259 inches

**Points: 362**



**Rik Work's Tulip Tree**  
*Liriodendron tulipifera*

Height: 117 feet  
Spread: 113 feet  
Circumference: 230 inches

**Points: 375**

## A Forester's Favorite

St. Louis-area resident Rik Work is proud of his family's champion tulip tree. "It's one tree I really coddle," he said.

This champion is also a favorite of MDC Community Forester Mark Grueber. "I can say that this tulip tree is one of the most beautiful trees I've ever seen," he said. "With permission, I've brought as many people to see that tree as possible. Everyone that has seen the tree is in awe of its size and beauty."

"My wife adores this tree as well," he said. "We both have numerous photos of it that we have as computer, phone, and TV wallpapers."

## Jane's Note

*The day I painted the tulip tree, there were kids doing exercises and drills in a nearby ballfield. The colossal tree had twisted, interactive branches randomly zooming out in all directions, some coming close to the ground. I set up on the edge of the ballfield to get a partial view in hopes of capturing a feel for the whole. I asked a willing volunteer, MDC Forester Mark Grueber, to sit on the bench — this helped me get a more accurate sense of scale.*



## A Big “Small” Tree

In Lawrence and Barry counties, Monett’s South Park is where you’ll find the state’s champion sassafras. To help visitors locate and identify the tree, South Park staff erected a sign there several years ago.

The tree is hard to miss, especially when it’s in full, fall-color glory, but it’s likely most people wouldn’t recognize it as a sassafras unless they’re familiar with the tree’s leaf shape. Usually a small-to-medium mid-story tree, sassafras typically forms colonies from root sprouts.

This champion’s single trunk is about 6 feet across. MDC Forester Cody Bailey said it’s hollow and “really big, really old.”

“When (sassafras) get 6 to 8 inches across at breast height, they tend to die,” he said. “They’re kind of a softer wood, not well protected like oak.”

## Jane’s Note

*South Park’s foreman, Kevin Smith, said people ask him all the time where the sassafras is. When I saw it, I knew it was the perfect time to paint it. The leaves were every shade of green, gold, and red-orange. It had both a gnarly and stately appearance. My painting process is almost always based on trial and error. I think this struggle helps me to get to know the tree somewhat. It can also allow for more spontaneity in making changes as the sun moves across the sky, revealing parts (and colors) that were unseen just moments before.*



### Monett’s South Park Sassafras *Sassafras albidum*

Height: 56 feet  
Spread: 39 feet  
Circumference: 197 inches

Points: 263

Mudd completed the sassafras mostly on-site, with little revision back in the studio. “Weather was ideal that day,” she said.

To see the artist at work, check out our flipbook version online at [mdc.mo.gov/conmag/2021-03](https://mdc.mo.gov/conmag/2021-03).

## Will You Find the Next Champion?

Champions are found in places that are protected or relatively undisturbed — a yard, a park, a campus, a farm, or a state conservation area.

Start your big tree search by browsing MDC’s State Champion Trees webpage at [short.mdc.mo.gov/Z4i](https://short.mdc.mo.gov/Z4i). There you’ll find eligibility criteria, details on measuring for a champion tree, a Missouri Champion Tree nomination form, a list of current champions, and an interactive champion tree tour. Happy hunting!



## Champion of Champions

Of the six trees Mudd painted for this story, the LaValle Family Trust's bald cypress in New Madrid County is the champion of champions with 456 points.

Bobby LaValle and his family have farmed in Missouri's Bootheel Region for generations.

His maternal grandfather, W.T. Riley, bought the land where the champion bald cypress stands in the 1930s or '40s. The original parcel was 8,000 acres, and most of it was cut for timber, "except for a few low spots," LaValle said.

He credits his mother, who inherited the land with the "low spots," for saving the remaining cypresses. "Mom wanted the bald cypress saved," he said.

LaValle said an MDC forester measured the tree in the late '80s, and, with a trunk "10 foot across the base," it became the state champion.

LaValle mentioned other big trees found near the champion bald cypress — swamp cottonwood and Drummond's red maple, for example. But it's the bald cypress he frets about.

"We had an ice storm 2009, and it was one of those storms that broke transfer lines for 50 miles — it was just unbelievable," he said. "That cypress is closest to the levee, and it survived the ice storm," he said, but he's not sure it can survive another epic ice storm.

"Can I put a lightning rod in it?" he asked. "I think it's worth protecting. Looking for someone to do lightning protection if they want to get in touch with me."

A dedicated conservationist, LaValle said he and his family will "always keep the 40 acres (where the champion cypress stands) in the trust jointly in perpetuity."

**"I credit Missouri artist and educator Frank Stack for teaching me what painting from life really means."**

—Jane Mudd



### Bobby LaValle's Bald Cypress

*Taxodium distichum*

Height: 111 feet

Spread: 72 feet

Circumference: 327 inches

Points: 456



"The immense bald cypress in its murky waters with complex reflections was a good reminder to just submit and embrace nature on its own terms," Mudd said.

## Jane's Note

Setting up was quite comical, my French easel was slowly sinking into the foot of water. But once I got it all somewhat stable and then mixed up some color, I began to feel like the luckiest person alive — to be there at that moment in such an enchanted place. The cypress stood out among all the others as dark and looming and huge! Around 3:30 p.m., the light dimmed considerably, and the first barred owl call came shortly thereafter. I did more revisions back in the studio for clarity's sake, including adding a little barred owl. I painted this in November 2020. ▲

Staff writer Bonnie Chasteen enjoys writing about people's connections to Missouri's fish, forests, and wildlife.





# Learning to Fish

MISSOURI IS A GREAT PLACE TO FISH IF YOU  
KNOW WHERE TO START

by **Andrew Branson**

**W**hen it comes to fishing, Missouri has a lot to offer. More than 200 species of fish live in the Show-Me State, and dozens of species offer opportunities for anglers. Seasons and limits are designed to keep the fish populations strong and healthy.

If you want to get started fishing and just don't know where to start, this article will help. It will provide basic information on fishing gear, methods, and resources. Many people learn to fish from someone else, but you can learn all on your own!





Teaching someone  
to fish can build  
great memories for  
you both.

PHOTOGRAPH BY  
DAVID STONNER



## Equipment

Sporting goods stores often stock mind-boggling inventories of equipment and accessories. Don't be misled or overwhelmed — you don't need a garage full of equipment to go fishing.

Fishing gear comes in a variety of styles, and it doesn't have to be expensive. A simple bamboo pole with fishing line and a hook is just fine for small fish that are close by, but most people prefer a pole with an open-faced reel or a spin-casting reel.

### Open-faced reel

The rod is typically held in the right hand with the reel on the underside for both casting and retrieving. Right-handed anglers reel with their left hand. Closed-faced reels with levers are also held in this position.

### Spin-casting reel

The rod is held with the reel up. Cast with the rod in the right hand and switch the rod to the left hand before retrieving. Reel with the right hand. (Some reels allow you to switch the handle to the other side of the reel if you prefer.)

You will want a good, all-purpose rod-and-reel combination to start — something that will let you catch fish of all sizes. Look for a medium-light rod from 5½ to 6½ feet long and a matching reel that will handle lines from 4-pound test to 12-pound test. (The “pound test” indicates the strength of the line.)

## Tackle Box

Sporting goods stores generally offer simple tackle boxes already filled with the basic items you need. If you would like to outfit your own tackle box, the following items will equip you nicely for your first outing:

- Bait and lures
- Hooks in a variety of sizes: Size 6, 16–20
- Sinkers in assorted sizes of split shot
- Bobbers
- Spare fishing line: Monofilament line, 6- to 12-pound test, 4-pound test or less
- Needle-nosed pliers and nail clippers
- Tape measure
- Stringer
- Landing net
- First aid kit
- Sunscreen and insect repellent
- Area map
- *A Summary of Missouri Fishing Regulations*
- *Know Your Catch* fish ID booklet



Crankbait



Open-faced reels can hold a lot of line, and are known for their casting distance and accuracy.



Spin-casting reels are simple to use, and usually the first type of reel a person learns with.

A properly stocked tackle box will help you adjust to changing conditions as you fish.



Popper



## Knots

There are many different fishing knots a person can learn. Here are a couple of simple knots that are very useful:

### Arbor knot

Most fishing reels do not come with fishing line. If this is the case, you will need to purchase fishing line and fill the spool on your reel. The arbor knot is used for attaching line to the spool of a fishing reel.

### Improved clinch knot

Use the improved clinch to tie on hooks and lures.

## Casting

Once you have fishing line on your rod and reel, it is a good idea to practice casting before your first fishing trip. This can easily be done in your yard or any open area.

Rather than practicing with an actual lure with hooks, use a rubber or plastic casting plug found at most sporting goods stores, or use an inexpensive lure with the hooks removed. Another option is to make your own practice plug by embedding a hook into the end of a wine cork.

### Steps to casting:

**Note:** Start with the plug hanging 1 inch below the rod tip, and then experiment by slightly increasing this distance.

**Grip:** Grasp the rod handle as shown in earlier illustrations and place your thumb on the release button of a spin-casting reel without pressing it.

**Stance:** Face your target with feet shoulder-width apart. If you are right-handed, put your right foot forward. If you are left-handed, put your left foot forward.

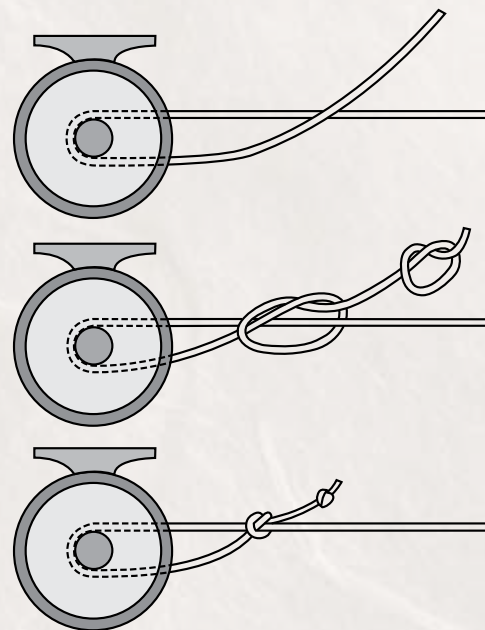
**Aim:** Place the rod in front of your body, pointing at the target. Press and hold the release button with your thumb for a spin-casting reel. For an open-faced reel, open the wire bail on the reel and hook the fishing line on your index finger. Now raise the rod to the 2 o'clock position.

**Cast:** Hold the rod so that the tip is at eye level and centered on the target. Your elbow should be close to, but not touching, your body. With a smooth upward motion, start the cast by raising your hand almost to eye level, bending the wrist and elbow so that the rod extends over your head and behind you. When the rod reaches the 11 or 10 o'clock position, the weight of the plug will cause the rod to bend to the rear. As it does, bring the rod forward in a crisp downstroke with the forearm, applying only a slight wrist motion forward.

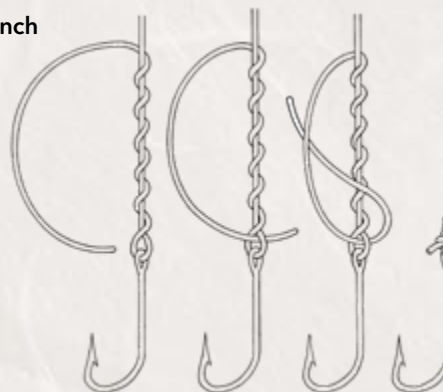
**Release:** When your rod reaches the 1 o'clock position on the forward cast, release the push button with your thumb, or line with your index finger depending on your reel, and allow the plug to travel toward the target.

**Follow-through:** As the plug is released, your arm should follow through to about the 3 o'clock position.

Arbor knot steps



Improved clinch knot steps



Being able to cast accurately is very important, and it will make your fishing trip more enjoyable.





Weightless Texas rig



Spinnerbait

## Rigging Up

### Bait

The bait you use depends on the kind of fish you're after. Bait includes minnows, crickets, grasshoppers, but the best all-around bait is probably a worm. Hook the worm several times through or pinch off part of a large worm and run the hook through it. Use a sinker to hold the hook down and a bobber to set the depth under the water. Be patient and watch the movement of the bobber to tell when a fish is interested in your bait.

### Artificial Lures

Fishing with artificial lures can be fun and exciting and is much more active than fishing with a bobber. Artificial lures either float or sink and require you to move the lure through the water to attract the fish. Artificial lures can be retrieved fast or slow.

**Tip:** Many sinking lures require you to keep your rod tip up, and reel in your lure quickly to prevent it from dragging and getting snagged on the bottom.

## Fishing Rules and Regulations

Fishing regulations ensure our fish populations are healthy and long lasting, making fishing better for all anglers. Many public fishing areas have the regulations posted such as size limits of the fish you can keep, but it is good to be familiar with regulations of the area you're visiting before you go. Fishing regulations can be found at [mdc.mo.gov/fishing](http://mdc.mo.gov/fishing), or by consulting *A Summary of Missouri Fishing Regulations*, available locally where permits are sold and online at [short.mdc.mo.gov/Zq3](http://short.mdc.mo.gov/Zq3).



Creature bait

Proper fish handling protects both you and the fish.



## Fishing Permit

Everyone over the age of 15 and under the age of 65 must have a permit to fish. The exceptions are residents and member of their household fishing on waters completely enclosed by their property and people with certifiable disabilities. Youth fishing without a permit are limited to using a pole and line, gig, bow, crossbow, snaring, grabbing, and snagging.

## Where to Fish

Missouri is blessed with lots of fishable water and has over 1 million acres of surface water. Many public fishing locations can be found at MDC areas, state parks, county and other community lakes, and river accesses. You can find a list of MDC fishing locations through the free MO Fishing app and at [short.mdc.mo.gov/Zq5](http://short.mdc.mo.gov/Zq5).

## Proper Fish Handling

Proper handling will help prevent injury to you and to the fish. To grab the hook, have ready the necessary equipment like a landing net and needle-nosed pliers or a similar tool. To avoid removing the protective slime coating on the fish, wet your hands before touching the fish. Don't put fingers in their gills or eyes or squeeze them too hard, and leave the fish in the water, if possible.

Grasp small fish around the body, flattening the spines. Some fish, like largemouth bass, can be grasped and lifted by their lower lip. Larger fish should also have their midsections supported.

With catfish, anglers should get a firm grip around the midsection, taking care to avoid the sharp spines in the dorsal and pectoral fins.





Hooks are available in many different shapes and sizes depending on the technique they are being used for and the fish you are trying to catch.

The hook on this fish should be easy to remove. Swallowed hooks should often be left on for released fish. This gives the fish a chance of dislodging the hook, or having it eventually rust away.

## Hook Removal

Keep the fish in water or directly in your wet hand. The hook can be removed by carefully backing it out through the hole made in the lip when the hook was set. Hemostats or needle-nose pliers will help to remove hooks set deeper in the mouth, throat, or tongue of the fish. Release fish as soon as possible. There's time for a quick picture, but the longer the fish remains out of the water, the less its chances of surviving.

If removing a swallowed hook will severely injure the fish, it is recommended to cut the line and release the fish. This will at least give the fish a chance of dislodging the hook, or having it eventually rust away.

You should be ready to grab your gear and head to your nearest fishing hole. But if you feel like you need a little more assistance, visit [mdc.mo.gov/fishing](http://mdc.mo.gov/fishing). There you will find information on free fishing classes, fishing locations, and more. ▲

*Andrew Branson has been with MDC since 2005 and now works out of the headquarters in Jefferson City. Andrew spends his free time fishing Missouri streams.*



## Rod and Reel Loaner Program

The Rod and Reel Loaner Program lets you check out free fishing poles and tackle boxes. Offered at more than 100 locations throughout Missouri, the loaner program makes basic fishing accessible to everyone. To find a loaner location near you, visit [short.mdc.mo.gov/ZJq](http://short.mdc.mo.gov/ZJq).

## Discover Nature — Fishing

Fishing is a great way for everyone to have fun outdoors, learn about conservation, and make happy memories together. Our Discover Nature — Fishing program helps Missourians gain the skills and confidence to go fishing on their own. Classes are free and no special equipment needed — we'll provide all the gear. For more information, visit [short.mdc.mo.gov/Z8Y](http://short.mdc.mo.gov/Z8Y).

## MO Fishing App

MO Fishing lets you buy permits, find great places to fish, and ID your catch. Get it on Android or iPhone platforms at [short.mdc.mo.gov/Zi2](http://short.mdc.mo.gov/Zi2).

## Free Fishing Publications

These titles are available free at many MDC locations. Call ahead for availability. Missouri residents may order a free copy from [pubstaff@mdc.mo.gov](mailto:pubstaff@mdc.mo.gov) or by calling 573-522-0108. Provide the publication title and your shipping address.

- *An Introduction to Fishing*
- *Know Your Catch*
- *A Summary of Missouri Fishing Regulations*



A red and white checkered picnic blanket is the background. In the center, there is a white butter dish with a yellow lid and a white knob. In the foreground, there are several large, green, oval-shaped leaves. The title 'Wild Edibles' is overlaid on the image. 'Wild' is in a large, green, cursive font, and 'Edibles' is in a smaller, white, sans-serif font with a black outline.

# Wild Edibles

DISCOVER NATURE'S BOUNTY BEYOND MOREL MUSHROOMS  
story and photos by Larry R. Beckett









Dandelions



Cattails

**M**orel mania strikes Missouri each spring and thousands of people venture to their closely guarded honey holes in hopes of finding the elusive mushroom. While certainly worthy of great attention, the morel is far from the only wild edible. A variety of wild plants — in the form of roots, stems, leaves, flowers, and fruits — can provide tasty nutrition. Dandelions, cattails, pawpaws, persimmons, elderberries, watercress, and even other mushrooms are just a few of the wild edibles that are abundant throughout the state.

## Dandelions

Collecting wild edibles can begin by stepping into your front yard. Dandelions (*Taraxacum officinale*), the bane of many landscapers and homeowners, sprout up abundantly in most untreated lawns statewide. Each summer, their feathery seeds are sent floating through the air with the slightest breeze or on the wish-filled breath of a child.

Dandelions can be identified by their toothy, deeply notched leaves that form a rosette, but the most distinguishing characteristic is the bright-yellow flowerhead. Flowering occurs from early spring to late autumn.

All parts of the dandelion are considered edible, but each one requires a different type of preparation. Dandelion roots, when eaten raw or cooked like other roots, possess a bitterness that most people find unappealing. When the roots are dried, roasted, and ground, they can then be steeped in water, resulting in a drink similar to coffee.

Dandelion leaves and stems are best harvested when they are young and tender. A fresh salad is a perfect dish to toss in a few. They also can be used like most greens and sautéed with lemon, bacon, or pine nuts.

The flowers of dandelions can be used as a colorful addition to fresh salads. They can be eaten before or after they are fully opened. Another tasty option is to batter and deep fry the yellow heads, much like zucchini flowers would be prepared.

## Cattails

If you are close to wetlands, marshes, ditches, moist fields, or ponds, cattails (*Typha latifolia*) likely can be found. Sometimes called bullrush, cattails provide another versatile wild edible.

In the spring, a small, green male head is just developing at the top of a tall, slender stalk. Once collected, the “husk” can be removed much like corn. Then, the cattail heads are prepared by boiling for about five minutes, brushing with butter, and eating like corn on the cob.

As the cattail heads mature, bright yellow pollen develops on them and can be collected by shaking them into a sealable plastic bag. The pollen can be used as a flour substitute when baking or as a thickener in soups or stews. The male head falls off during pollination and the female head just below it becomes tough and brown as summer sets in. The female head transforms into fluffy seeds during the fall that can be collected and used for insulating pillows, clothing, and quilts.

Young cattail shoots emerge from the roots in the spring and are also a prize wild edible. The outer leaves of the shoots can be removed and the remaining white core can be eaten raw, boiled, and prepared like asparagus, or sliced and tossed into a stir fry dish. Pickling is another popular way to prepare the young, tender shoots.

The cattail roots, or rhizomes, also can be consumed in several ways. They first must be collected by digging into the mud. Large rhizomes are more desirable and are prepared by cleaning, trimming away any smaller, branching roots, and peeling off the outside layer. The cattail root can be prepared by baking, grilling, or boiling until tender. The result will be a combination of fibers and starch. Eating the root is like eating an artichoke — the starch is removed by scraping your teeth along the fibers. Cattail roots often are used to make a flour substitute or thickener. Allow the cleaned cattail roots to become dry or they can also be placed in an oven, set at 200 degrees, overnight to speed the process. Pound the dry roots with a mallet to collect the flour.





Pawpaws



Persimmons

The plum-shaped persimmon fruit transforms from green to orange and wrinkles when ripe.

## Pawpaws

The pawpaw (*Asimina triloba*), sometimes referred to as the Missouri banana, is common throughout the state. The pawpaw can grow as a shrub or medium-sized tree and usually appears along river bottoms or shaded slopes near streams. Since they propagate through root suckers, when you find one you usually will find several.

Pawpaws have unique fruits and leaves that help in their identification. The fruits range from about 2 to 5 inches long. Their initial green color and short, stout banana shape as well as the custard-like interior give them their nickname. As the fruits ripen around September or October, their exterior becomes brown. Pawpaw leaves usually stand out amongst the other plants in their habitat. They are large, 6 to 12 inches long, with an oblong shape. As fall progresses, the leaves deep green color change to yellow.

Once collected, the pawpaw fruits are prepared by cutting them in half. This exposes the pulp and the large, brown seeds that are easily removed. The pulp can be eaten raw or used as a banana substitute in many dessert recipes, such as pawpaw ice cream.

Pawpaw fruits make a delicious ice cream similar in flavor to banana.



## Persimmons

Persimmons (*Diospyros virginiana*) are one of the most widely known wild edibles in the state. When they are ripe, persimmons have a sweet flavor that it is hard to beat but catching them at the right time is the key.

Often seen in hardwood forests, persimmon trees also can be found in fields and prairies. As with pawpaws, finding one tree often results in finding a grove of trees due to the sucker roots. The leaves of persimmon trees are dark green on top and lighter on the bottom with an oval shape on short stalks, but the most identifiable characteristic (other than the fruit) is the highly textured bark. Often compared to alligator hide, the height of the bark's ridges and the depth of the valleys appear as if they were formed over thousands of years of movement by a fast-flowing stream.

Persimmon leaves can be collected and steeped in water, resulting in a taste similar to sassafras tea. The seeds of a persimmon can be removed, roasted, and ground to make caffeine-free persimmon coffee. The persimmon fruit, however, is the star of the show. Persimmon fruit is similar in shape to a plum, but smaller, and remains green throughout the summer. As fall progresses and temperatures cool, they transform into bright orange, but the color is not an indication of taste. The bitterness fades as the persimmon becomes wrinkled and squishy to the touch. If you think it is too soft, it's probably just about right.

Persimmons can be eaten directly from the tree or saved for a variety of uses. Smash the fruit in a colander to remove seeds and skin. The resulting pulp can be used for baking. Persimmon bread is easily prepared by swapping banana for persimmon pulp in your favorite banana bread recipe.



## Elderberries

Elderberry (*Sambucus canadensis*) bushes are common statewide and can be found along roadsides or streams, in open woods, or hidden in fencerows or thickets. They form colonies from root sprouts and can reach a height of 8 feet or more.

Elderberry bushes are most easily identified by the flowers or fruit. Each flower is radially symmetrical with five flattened, white petals with the flowers forming an umbrella-shaped cluster. The fruit ripens in later summer to a dark purple in drooping clusters. Elderberries are high in vitamin C but should not be consumed raw. The alkaloids in the berries can cause nausea until they are degraded through cooking. The berries are often used in pies, muffins, and jellies.

The elderberry flower clusters can also be eaten but should be cooked as well. As with many wild edibles, the flowers can be dried and then steeped with hot water to make a tea. The flower clusters also can be dipped in batter and deep fried for an elderberry fritter. The leaves, bark, and roots contain a bitter alkaloid and a glucoside that can produce a cyanic acid and should be avoided.

Elderberry



# Wild Baking

## Elderberry Pie

### Ingredients

4 cups elderberries  
1 cup sugar  
6 tablespoons flour  
1 tablespoon lemon juice  
½ teaspoon lemon zest  
Refrigerated prepared double pie crust

**Preheat** oven to 425 degrees.

**Heat** elderberries, sugar, flour, and lemon juice in medium sauce pan, stirring occasionally. When mixture begins boiling, remove from heat while preparing the crust.

**Place** bottom crust in 9-inch pie pan. Pour elderberry mixture into crust. Place top crust over berries and seal the edges by pinching the two crusts together. Poke a few holes in top crust to allow venting.

**Bake** for 10 minutes and then reduce oven temperature to 350 degrees. Bake an additional 30 minutes or until crust is golden brown. If edges of crust are browning too quickly, cover them with aluminum foil. When pie is done, remove from oven and place on cooling rack.

## Watercress

If you venture near the cold water of a spring or a spring-fed stream, you will often see a short, bushy colony of small, bright-green leaves emerging from the surface. Watercress (*Nasturtium officinale*) is a member of the mustard family and a common aquatic plant in southern and central Missouri. White flower clusters with four tiny petals bloom from April to October. The stems rarely grow over 10 inches high and contain three to nine small oval leaves.

To harvest watercress, simply pinch the stems off at the waterline. The plants also can be pulled up by the roots and trimmed later but leaving the roots in place ensures future harvests. The fresh greens can be added to salads or sandwiches for a peppery kick. Watercress, like most mustard plants, can also be prepared by sautéing with butter quickly until wilted.

## Mushrooms

In addition to the ever-popular morel, Missouri is home to many other wild edible mushrooms. Dryad's saddle, inky caps, and turkey tail are just a few of the uniquely named varieties that can be collected. Although deep-frying is a tasty way to enjoy many wild mushrooms, they also can be used in other recipes in place of cultivated mushrooms.

Unlike many mushrooms, Dryad's saddle mushrooms (*Pleurotus ostreatus*) don't typically grow on the ground. You will find them from May–October attached to the sides of logs, stumps, and deciduous tree trunks growing singly or in overlapping



clusters resembling shelves. The broad, fleshy, caps are tan and covered with darker scales. Their feathery appearance of the coloration gives them the nickname pheasant back mushrooms. The shell-shaped caps range from 2 to 12 inches with a short stalk and black base, and they emit an odor similar to watermelon rind. The larger Dryad's saddle mushroom tends to become tough, so collecting smaller caps is recommended. Scrape the spores off the underside of the caps with a butter knife or spoon and trim the tender portions of the cap into thin strips. Sauté in butter for a delicious side dish. The cooked pieces also can be drained, patted dry, and refrigerated in a jar of homemade sugar syrup to create a treat that tastes like watermelon candy.

Inky cap mushrooms (*Coprinellus micaceus*), also known as mica cap, grow in clusters around woody debris or tree stumps from April to October throughout Missouri. The caps are bell or egg-shaped and transition from light to dark brown and then inky black as they age. When younger, the caps are covered with granules similar to mica that give them their common name. Although growing only 1–3 inches in height, the large clusters can provide an abundance of mushrooms. Inky caps should be cooked and eaten as soon as possible as they will liquify into “ink” during a short time after harvest, even with refrigeration. They can be prepared by sautéing in butter or sliced and used as a mushroom substitute for pizza toppings, in meatloaf, or any recipe calling for button, portabella, or other mushroom varieties.

Turkey tail mushrooms (*Trametes versicolor*) grow year-round throughout the state on stumps and deciduous trees. Unlike the soft, thick caps of most mushrooms, turkey tail mushroom caps are thin and leathery in texture. The semicircular, 1-to-4-inch caps have stripes of colors from varying shades of black, gray, blue, green, rust, and white with the outside edge always being the lightest color. It is the color banding that gives the turkey tail mushrooms their name. The texture of turkey tail mushrooms usually limits their edibility to grinding the caps and using to prepare a tea or adding to soups.

Only eat mushrooms you know are safe. To be sure, consult *A Guide to Missouri's Edible and Poisonous Mushrooms* at [short.mdc.mo.gov/ZYM](http://short.mdc.mo.gov/ZYM).

Collecting wild edibles is a great way to spend the day in Missouri's outdoors. Wild edibles typically have a short storage life, so collect only what you can consume and leave the rest for another day. Ensure that you have permission if collecting on private property. Opportunities also exist on public land but know the regulations. Collection of nuts, berries, fruits, edible greens, and mushrooms for personal consumption is allowed on most MDC areas. Restrictions apply to nature centers, conservation headquarters, and other areas, so it is always best to consult the specific area regulations before venturing out in search of any of the delicious and abundant wild edibles of Missouri. ▲

Larry Beckett is a writer, photographer, and videographer from Jasper County. He can be found throughout the year foraging for Missouri's abundant wild edibles.



The peppery-kick of watercress spices up a fresh salad.



Dryad's saddle mushrooms can be found growing on the sides of logs, stumps, or trees. They make a tasty meal sautéed in butter or fried in oil.

## Precautions

Collecting wild edibles is not something that should be done without caution. There are many look-alike poisonous plants and mushrooms that resemble edible varieties but can result in serious illness. **If in doubt on the identification of any wild edible, do not eat it.** Wild edibles that are considered safe for most can cause some people to have an adverse reaction. When consuming a positively identified wild edible for the first time, it is best to eat sparingly until you are certain that a reaction will not occur. If taking medications, a physician should be consulted about potential interactions. Wild edibles should only be collected from areas that are free from contamination and be cleaned thoroughly to reduce the risk of ingesting insects, debris, or unexpected contaminants. Those collected from or near water sources should be washed thoroughly.



# Get Outside

in **MARCH** →

Ways to connect  
with nature



## Tree Buds

Redbud trees, one of Missouri's showiest native flowering trees, bloom in late March and continue through early May. In fact, their bare branches will be covered in rose-purple flowers before any leaves appear. Not only do these blooms help paint the spring landscape, they are also edible. The buds have a nutty, sweet taste similar to sugar snap peas that can be added to salads, either raw or pickled.



## Forget Tiptoe Through the Tulips — Walk Through the Wildflowers

If you are interested in Missouri's native wildflowers, March is your month! There is a multitude of wildflowers blooming across the state this month. Take a walk through the woods, near a field, or at your closest conservation area and see how many you can find. Use the list at this site as a starter guide: [short.mdc.mo.gov/Zaq](https://short.mdc.mo.gov/Zaq).



### Natural Events to See This Month

Here's what's going on  
in the natural world.



Crayfish  
become  
active in  
streams



American  
mink  
breed



Paper wasps  
are one of the  
earliest insects  
to become  
active in spring



## Stoneflies Emerge

Most people are completely unaware that stoneflies exist — unless they happen to see a large group congregating near a stream — but they are a favorite food of many types of fish. Anglers, especially fly-fishers, take note. This is the time to employ lures that closely resemble these stonefly species.

## Trout Time

March 1 has been the opening day of trout season in Missouri for nearly a hundred years. The earliest recorded account of the opening day of trout fishing in Missouri trout parks is 1926, at Bennett Spring State Park. The first formal Missouri trout park opener ceremony occurred at Roaring River State Park in 1932. Get out there and be part of this long-held tradition. For more information on trout fishing, visit [short.mdc.mo.gov/Z5r](http://short.mdc.mo.gov/Z5r).



Brown trout

VIRTUAL

## Native Plants

Thursday • March 18 • 12–1 p.m.

Virtual event at Anita B. Gorman Conservation Discovery Center,  
4750 Troost Ave., Kansas City, MO 64110

Registration required at the Deep Roots website  
at [deeproots.org/native-plants-at-noon](http://deeproots.org/native-plants-at-noon)

We'll virtually tour the native landscape at MDC's Anita B. Gorman Conservation Discovery Center. Guided by native landscape specialists Alix Daniel and Cydney Ross, this monthly series features a live look at native plants of interest throughout the year. This program is a partnership with Deep Roots.



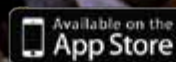
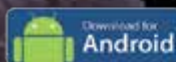
Eastern  
gartersnakes  
breed



Red-winged  
blackbirds  
pair off, begin  
defending  
breeding  
territories

# EXPLORE MISSOURI

## DISCOVER NATURE ANYWHERE





# Places to Go

ST. LOUIS REGION

## Marais Temps Clair Conservation Area

Wetlands offer opportunity for hard-core and fair-weather visitors

by Larry Archer

✧ In March, Marais Temps Clair Conservation Area (CA), whose name in French means “fair weather marsh,” has plenty to offer both hard-core and fair-weather hikers and birders.

“Our spring waterfowl migration is going pretty good,” said Marais Temps Clair CA Manager Gary Calvert. “So, in March, there’s an opportunity to be able to see a lot more birds.”

Located in St. Charles County in the flood plain between the Missouri and Mississippi rivers, the nearly 918-acre Marais Temps Clair CA hosts migrating waterfowl heading north. Nearly two-thirds of the area is managed wetlands, which attracts a wide variety of waterfowl and shorebirds, Calvert said.

Waterfowl and shorebirds are not the only winged attractions, as bald eagles have also taken up residence in the area.

“There’s one nest on Marais Temp Clair, but there’s two or three other nests within a few miles,” he said. “So, it’s not uncommon to see bald eagles any time of year.”

Although the area has no designated hiking trails, the more than 11 miles of levee-top service roads are open to hiking, he said.

“They could weave around and make that several more miles if they wanted,” he said.

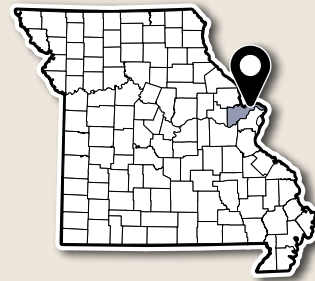


DAVID STONNER





The sun sets over the wetlands of Marais Temps Clair CA. The area's wetlands and extensive levee system make it ideal for hiking and birding.



## MARAIS TEMPS CLAIR CONSERVATION AREA

consists of nearly 918 acres in St. Charles County.  
Go north from St. Charles on Highway 94 to  
Route H. Follow Route H northeast to Island Road  
and go north on Island Road to the area.

38.9117, -90.416

[short.mdc.mo.gov/Zbo](http://short.mdc.mo.gov/Zbo) 636-441-4554

### WHAT TO DO WHEN YOU VISIT



**Birdwatching** Included in the National Audubon Society's Great Rivers Confluence Important Bird Area ([short.mdc.mo.gov/Zb4](http://short.mdc.mo.gov/Zb4)). Included in the Great Missouri Birding Trail ([short.mdc.mo.gov/ZbZ](http://short.mdc.mo.gov/ZbZ)). The eBird list of birds recorded at Marais Temps Clair CA is available at [short.mdc.mo.gov/Zbk](http://short.mdc.mo.gov/Zbk).



**Fishing** Catfish



**Hiking** More than 11 miles of service roads open to hiking.



**Hunting Deer** Deer regulations are subject to annual changes. Please refer to the Fall Deer and Turkey booklet for current regulations.

Also **dove**



**Trapping** Special-use permit required.



**Waterfowl Hunting** Morning draw. Waterfowl regulations are subject to annual change, so check the *Migratory Bird and Waterfowl Hunting Digest 2020-2021*.

### WHAT TO LOOK FOR WHEN YOU VISIT



Muskrat



Snapping turtle



Wilson's snipe



American bullfrog





## Horned Lark

*Eremophila alpestris*

Status	Size	Distribution
Common	7¼ inches	Statewide, uncommon in the Ozarks

**T**he horned lark's black forehead and eyebrow line extend into short "horns" on the bird's crown, contributing to its moniker.

They can be found in large open areas with extensive bare ground. Horned larks are especially common in plowed agricultural regions, nesting early before vegetation has grown tall. Their camouflaged upperparts make them inconspicuous, but they often occur in flocks, and their movement against the ground, and their distinctively marked faces and "horns," can help you see them. They also sing and call from the ground, which can help pinpoint them. Their song, a soft twittering and tinkling sound, usually delivered in flight, is a lisping *tsee* or *tzee-te-te*.



### Did You Know?

True members of the lark family are numerous throughout Africa, Europe, and Asia. Early American settlers, confronted with new species, often gave good-singing birds names such as "meadowlark," which is actually in the blackbird family.



### ECOSYSTEM CONNECTIONS

Like other ground nesters, horned larks lose many young to predators, such as raccoons, skunks, and weasels. Females avoid drawing attention to the nest. If a predator does draw near, they perform a distraction display similar to the "broken-wing act" of killdeer, also ground nesters.



### FOODS

The horned lark's diet includes both seeds and insects. Seeds are picked from the ground or low plants. During nesting season, growing young need additional protein, so insects are eaten more frequently. Grasshoppers, beetles, sowbugs, and caterpillars are among the prey.



### LIFE CYCLE

One of Missouri's earliest nesting birds, nesting can begin in February. Nests are on bare ground or in short grass, on golf courses, airports, or open agricultural fields. The young often fledge before spring plowing. Courtship songs and displays begin in January and February.



# Outdoor Calendar

❖ MISSOURI DEPARTMENT OF CONSERVATION ❖



## FISHING

### Black Bass

Impounded waters and non-Ozark streams:  
Open all year

Most streams south of the Missouri River:

- ▶ Catch-and-Release:  
March 1–May 21
- ▶ Catch-and-Keep:  
May 22, 2021–Feb. 28, 2022

### Bullfrogs, Green Frogs

June 30 at sunset–Oct. 31, 2021

### Nongame Fish Giggling

Impounded Waters, sunrise to sunset:  
Feb. 16–Sept. 14, 2021

### Paddlefish

Statewide:  
March 15–April 30, 2021

On the Mississippi River:  
March 15–May 15, 2021  
Sept. 15–Dec. 15, 2021

### Trout Parks

Catch-and-Keep:  
March 1–Oct. 31, 2021

## TRAPPING

### Beaver, Nutria

Nov. 15, 2020–March 31, 2021

## HUNTING

### Bullfrogs, Green Frogs

June 30 at sunset–Oct. 31, 2021

### Coyote

*Restrictions apply during April, spring turkey season, and firearms deer season.*

Open all year

### Crow

Nov. 1, 2020–March 3, 2021

### Deer

Archery:  
Sept. 15–Nov. 12, 2021  
Nov. 24, 2021–Jan. 15, 2022

Firearms:

- ▶ Early Youth Portion (ages 6–15):  
Oct. 30–31, 2021
- ▶ November Portion:  
Nov. 13–23, 2021
- ▶ Late Youth Portion (ages 6–15):  
Nov. 26–28, 2021
- ▶ Antlerless Portion (open areas only):  
Dec. 4–12, 2021
- ▶ Alternative Methods Portion:  
Dec. 25, 2021–Jan. 4, 2022

### Groundhog (woodchuck)

May 10–Dec. 15, 2021

### Pheasant

Youth (ages 6–15):  
Oct. 30–31, 2021

Regular:

Nov. 1, 2021–Jan. 15, 2022

### Quail

Youth (ages 6–15):  
Oct. 30–31, 2021

Regular:

Nov. 1, 2021–Jan. 15, 2022

### Rabbit

Oct. 1, 2021–Feb. 15, 2022

### Squirrel

May 22, 2021–Feb. 15, 2022

### Turkey

Archery:  
Sept. 15–Nov. 12, 2021  
Nov. 24, 2021–Jan. 15, 2022

Firearms:

- ▶ Youth (ages 6–15): April 10–11, 2021
- ▶ Spring: April 19–May 9, 2021
- ▶ Fall: Oct. 1–31, 2021

### Waterfowl

See the Migratory Bird and Waterfowl Hunting Digest or visit [short.mdc.mo.gov/ZZx](http://short.mdc.mo.gov/ZZx) for more information.



## Free MO Hunting and MO Fishing Apps

MO Hunting makes it easy to buy permits, electronically notch them, and Telecheck your harvest. MO Fishing lets you buy permits, find great places to fish, and ID your catch. Get both in Android or iPhone platforms at [short.mdc.mo.gov/Zi2](http://short.mdc.mo.gov/Zi2).

For complete information about seasons, limits, methods, and restrictions, consult the *Wildlife Code of Missouri* at [short.mdc.mo.gov/Zib](http://short.mdc.mo.gov/Zib). Current hunting, trapping, and fishing regulation booklets are available from local permit vendors or online at [short.mdc.mo.gov/ZZf](http://short.mdc.mo.gov/ZZf).





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on Instagram**

@moconservation

A new season is on the horizon. Like this fragile fern, many species use this time to break through the trappings of winter and embrace all this season has to offer. Spring ushers in warmer days, abundant wildflowers, and nature's soundtrack — a constant chorus of songbirds, frogs, coyotes, and more. Get out and discover nature.

📷 by **Noppadol Paothong**

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